Patent claims

1. Process for fixing at least one balancing weight (1) to at least one location (2) on a hollow shaft (3), characterized in that the at least one balancing weight (1) is secured to the at least one location (2) by means of soldering.

2. Process according to Claim 1, characterized in that the at least one balancing weight (1) is secured by means of soft soldering.

3. Process according to Claim 2, characterized in that the hollow shaft (3), at the at least one location (2), does not exceed a maximum temperature of 450°C during the soldering.

4. Process according to one of the preceding claims, characterized in that solder material (4) without flux is used.

5. Process according to one of the preceding claims, characterized in that the soldering operation at the at least one location (2) lasts no longer than 3 seconds.

6. Process according to one of the preceding claims, characterized in that during the soldering a joining force (6) of less than 2000 Newton is exerted on the at least one balancing weight (1) towards the hollow shaft (3).

7. Process according to one of the preceding claims, characterized in that the at least one balancing weight (1) is first of all provided with solder material (4) and is then fixed to the hollow shaft (3).

8. Process according to Claim 7, characterized in that a plurality of balancing weights (1) are fixed,

and at least in some cases different quantities of solder material (4) are provided at the balancing weights (1).

9. Process according to one of the preceding claims, characterized in that at least one of the following heat sources (7) is used for the soldering: inductor, convector.

10. Process according to one of the preceding claims, characterized in that at least the balancing of the hollow shaft (3) and the soldering of the at least one balancing weight (1) are carried out in one machine.

11. Hollow shaft (3) produced as described in one of the preceding claims, characterized in that it has at least one of the following parameters:

- diameter (8) in the range from 40 to 100 mm;
- wall thickness (9) in the range from 1.0 to 3.0 mm;
- length (10) in the range from 300 to 2000 mm.

12. Hollow shaft (3) according to Claim 11, characterized in that the hollow shaft (3) comprises a steel material and has a mean tensile strength in the range up to 1000 N/mm^2.

13. Hollow shaft (3) according to Claim 11, characterized in that the hollow shaft (3) comprises a light metal material.

14. Hollow shaft (3) according to one of Claims 11 to 13, characterized in that the at least one balancing weight (1) at least has a density of 7.0 g/cm^3.

15. Hollow shaft (3) according to one of Claims 11 to 14, characterized in that the at least one balancing weight (1) has a height (11) which does not exceed 3.0 mm.

16. Hollow shaft (3) according to one of Claims 11 to 15, characterized in that the soldered join (12) between the hollow shaft (3) and the at least one balancing weight (1) has a soldered tensile strength in the range from 100 to 140 N/mm^2.

17. Drive system (13) for a vehicle (14) comprising at least one hollow shaft (3) according to one of Claims 11 to 16.

18. Vehicle (14) comprising a drive system (13) according to Claim 17.